IN THE UTAH COURT OF APPEALS

----ooOoo----

State of Utah, in the interest of Z.D. and A.D., persons under eighteen years of age.

_____

S.B.D. and L.D.,

Appellants,

v.

State of Utah,

Appellee.

OPINION
(For Official Publication)

Case No. 20030750-CA

F I L E D
(July 29, 2004)

2004 UT App 261

Third District Juvenile, Salt Lake Department

The Honorable Olof A. Johansson

Attorneys: Sara Pfrommer, Park City, for Appellants

Mark L. Shurtleff and John M. Peterson, Salt Lake City, for Appellee

Martha Pierce and Robert N. Parrish, Salt Lake City, Guardians Ad Litem

---

Before Judges Billings, Bench, and Thorne.

BENCH, Associate Presiding Judge:

¶1 S.B.D. and L.D. (Father and Mother) challenge the sufficiency of the evidence supporting the juvenile court's determination that Z.D., one of their children, suffered a femur fracture while in Father's care. After receiving evidence,(1) the court determined that "sufficient and clear and convincing evidence has been established . . . to conclude it

was non-accidental trauma without a reasonable and acceptable explanation from either parent as to its causation." We reverse.

BACKGROUND

¶2 Father took care of his infant son, Z.D., and two-year-old daughter, A.D., for most of the day on Saturday, November 16, 2002, while Mother was away from the home. Early that morning, before leaving, Mother gave Z.D. a dose of Tylenol for the earache, constipation, and teething that Z.D. had been experiencing in the days prior. He was not given another dose of Tylenol until later that evening. Z.D. took a nap in the afternoon. When Z.D. awoke, he was fussy, and Father noticed that he was favoring his left leg by holding his foot up so that it did not touch Father's lap. Father laid Z.D. in his lap and rubbed the leg because Father thought the flu shot Z.D. had received on Friday, November 15, 2002, was bothering him. Z.D. did not like having his leg rubbed and continued to be fussy. Father wrapped him up tightly in what the parents called a "burrito wrap" and held him. Z.D. stopped being fussy and appeared comfortable. When Mother returned home that evening, she also noticed that Z.D. was favoring his left leg. Mother and Father attributed Z.D.'s favoring of his left leg to the flu shot, but called Kids Care just to be sure. Kids Care reassured them that there was no need to worry, and that Z.D. did not need to be examined. That night Z.D. slept normally and did not display fussiness indicative of pain.

¶3 On Sunday morning, November 17, 2002, when Z.D. continued to favor his left leg, Father took him to Primary Children's Medical Center (Primary) to be examined. The first doctor at Primary to examine Z.D. moved his leg around some, but could not find anything wrong. Another doctor came and placed Z.D. on an examination table. The second doctor pushed Z.D.'s legs up against his torso, straightened and bent his legs, and wiggled and moved them around. Z.D. cried fairly intensely. After Z.D.'s leg was x-rayed, Father was told that Z.D.'s left femur was fractured just above the knee. Z.D. was described by hospital workers as cheerful, interactive, alert, and slightly fussy, but consolable. At some point, Z.D. was examined by Dr. Bridgette Sipher. Sipher noted that Z.D. was in no apparent distress except when his left leg was manipulated. Additionally, there was no bruising anywhere on Z.D.'s body, and no fever, redness, or swelling. Sipher recommended Tylenol or ibuprofen for pain, with Lortab to be considered if necessary. Although there was decreased movement in Z.D.'s left leg, Z.D. was still moving it independently.

¶4 In accordance with Primary's policy to notify the State whenever a fracture is discovered in a nonambulatory child, the emergency room staff immediately notified the Division of Child and Family Services (DCFS).(2) The emergency room staff also notified the Center for Safe and Healthy Families, a group at Primary responsible for identifying and investigating suspected cases of child abuse. Dr. Bruce Herman, a

pediatrician and member of the Center for Safe and Healthy Families team, took charge of the investigation and examined Z.D. at Primary the following day, Monday, November 18, 2002. After interviewing Father and Mother, Herman concluded that Z.D. had become acutely symptomatic on Saturday, November 16, which would be consistent with the fracture occurring on that day. He also opined that the mechanism causing the fracture would most likely be excessive axial loading of the femur, and that the parents offered no history providing such a mechanism.

¶5 Because Father was employed by DCFS as an in-home child welfare worker, DCFS retained an independent investigator, Paul Dean, to conduct an investigation of the circumstances surrounding Z.D.'s fracture. Dean first saw Z.D. at Primary. Z.D. was wearing only a diaper, shirt, and fabric splint on his left leg. No marks were visible on Z.D.'s exposed body parts. When Dean interviewed Father and Mother, neither of them could provide an explanation consistent with the mechanism Dr. Herman had described.

¶6 On Tuesday, November 19, 2002, Mother, Father, and Z.D.'s grandparents were at the hospital when Herman stopped by the hospital room. Mother's mother (Grandmother) asked Dr. Herman whether the fracture could have occurred during an incident with a baby walker on the previous Wednesday, November 13, 2002, where Z.D.'s leg became stuck in the walker and Grandmother released his leg by pulling it through the hole of the walker. Herman did not acknowledge the question and, instead, continued to talk. Grandmother asked the same question again. Herman continued to write on his notepad and then left the room. The next day, Grandmother again posed the walker question to Herman, who then said that the walker incident was not a possible cause of the fracture. He did not follow up on Grandmother's question at that time.(3)

¶7 Later, on December 11, 2003, the family requested a meeting with Herman and other members of the Center for Safe and Healthy Families in order to present the walker incident as a possible mechanism for the fracture. Grandmother gave a demonstration of how she had tried to place Z.D. in his walker, but his left leg became stuck, his knee bent with his foot behind him. In her attempt to extricate his wedged leg, she placed her left hand and thumbs on his left leg above his knee and pushed, and then pulled his foot down through the hole of the walker with her right hand. Z.D. let out a shrill, vigorous cry, but calmed down within fifteen seconds.

¶8 In a separate meeting, after Grandmother demonstrated the walker incident, the Primary doctors met and agreed that their opinions were unchanged by the demonstration. Kari Cunningham, Primary's liaison to DCFS and a child protective services worker with DCFS, was present at the meeting with the doctors. She observed that the doctors agreed that someone could have caused the fracture using their hand, but that the force involved in the walker incident would not have been sufficient to cause the fracture. Cunningham testified that, in discussing the mechanism and forces involved, the doctors did not discuss the medications Z.D. had been taking, the fact that he was often placed in a burrito wrap, and Z.D.'s activities in the days between Wednesday and Saturday.

¶9 Dr. G. William Nixon, a pediatric radiologist at Primary, did not participate in this meeting. Nixon had earlier opined that the fracture was not caused by direct axial loading, consistent with Herman's opinion, but rather was caused by angular leverage. Dr. John Smith, a pediatric orthopedist at Primary, was also not present during the walker demonstration on December 11, 2002, but was consulted via telephone. Smith wrote a letter dated December 11, 2002 in which he explained that the fracture could result from the forceful wedging of the leg over a fulcrum (as in the walker incident), but that it would be "difficult to know the degree of force that would be required to produce this fracture by this mechanism."

¶10 At trial, Herman elucidated his position regarding the possible mechanism of the fracture:

We [the doctors] all agreed that that [the walker incident] would not be the typical mechanism or the one we would usually see to explain that fracture and I certainly have not said that that would have been impossible to be the mechanism. I have that--and it's still my opinion that it was unlikely that that was the mechanism.

In clarifying his view, Herman said that while the walker incident was a possible mechanism for the fracture, it was not the likely mechanism. As to whether he significantly disagreed with Nixon as to the mechanism of the fracture, he answered, "Significant is a word--I mean we had disagreements about the actual mechanism that could have caused this but would I describe them as significant? No, sir."

¶11 On cross-examination, Dean said it would have been important for him to know whether there was a disagreement among the doctors as to the probable mechanism of the fracture; however, Dean was not made aware of the differing opinions. Dean also testified that he did not know, and did not consider the fact, that Z.D. had been taking Tylenol between the time of the walker incident and when he entered the emergency room on Sunday morning. Nor was Dean aware that Z.D. had been suffering from constipation and an earache, had been teething during that time period, and had received a flu shot on Friday. Dean admitted that all of these factors would have been important for him to know.

¶12 In his testimony, Herman identified three factors to be considered in investigating Z.D.'s fracture: 1) the type of fracture, which helps to determine the mechanism and force; 2) the age of the fracture; and 3) the symptoms associated with the fracture. He explained that, taken together, these factors demonstrated that Z.D.'s femur fracture was the result of nonaccidental trauma inflicted on Saturday, November 16, rather than the walker incident on Wednesday, November 13.

¶13 As to mechanism, Herman testified that he was "51/49" percent certain that the fracture was caused by a significant axial force applied to a bent knee. As to the force, Herman thought it unlikely that the walker could generate the forces required to fracture the femur. As to the age of the fracture, both Wednesday (the date of the walker incident) and Saturday (the date Herman noted Z.D. manifested symptoms), fit within the time

period identified as when the fracture could have occurred. As to the type and timing of symptoms, Herman thought that if the walker incident had been the cause of the fracture, then Mother and Father would have noticed symptoms of a broken leg prior to Saturday. Herman maintained that symptoms of a broken leg would have been apparent, especially when Z.D.'s leg was moved during daily activities like diaper changes and clothing changes. Regardless of Z.D.'s teething, earache, constipation, taking of Tylenol, absence of external injuries, and the fact that he was often tightly swaddled in a burrito wrap, which mimicked a splint, Herman doubted that the symptoms of a broken leg could be hidden from a vigilant caretaker from Wednesday to Saturday.

¶14 Mother and Father called a number of witnesses. David Ingebretsen, an expert in the field of bio-mechanical engineering, testified that the fracture pattern was consistent with the forces identified by the walker incident. Debbie Hosseini, a registered nurse who works with the early intervention program helping premature babies with their development, had come to Z.D.'s home every month to observe him. She testified that he was a very happy baby, always smiling, and very easy to console. She never saw any bruising or swelling on Z.D.

¶15 Finally, Dr. Steven Scott, an expert in pediatric orthopedics, gave extensive testimony. Scott testified that the femur fracture did not follow the typical pattern of nonaccidental trauma, and he disagreed with Herman as to the probable mechanism. After examining the fracture pattern, and feeling that it did not fit the typical pattern that is normally seen with nonaccidental trauma, he wanted to know if there was an explanation for the fracture that fit the fracture pattern. Scott believed that the fracture pattern required a marriage of two forces in the same mechanism. He thought that Grandmother's walker demonstration "mimicked the forces exactly that would be needed to produce the fracture pattern." As to the force, he testified that there is no real way to know how much force is required to break a bone on a particular person, but the walker incident created a leverage force, and leverage forces create great force when little force is applied. Additionally, the area of the bone where the fracture occurred was a weaker area of the femur, and Z.D.'s delayed bone age gave him a weaker bone because it had less mass and was composed of immature woven bone, making it structurally weak.

¶16 In discussing the symptoms of a fracture, Scott agreed with Herman that bone pain is typically worse with any kind of manipulation or movement, but thought that in a child of Z.D.'s age, symptoms would be more generalized fussiness, irritability, crying, and lack of movement of his leg. He also explained that wrapping Z.D. in a burrito wrap would influence a caretaker's ability to detect symptoms because swaddling is exactly what happens when a child has a splint. Scott's opinion as to the onset of symptoms was also different from Herman's. Scott did not find it remarkable for three days to elapse before Mother and Father noticed symptoms of the fracture. As examples, Scott said that in the eighteen years he had been involved in taking care of children's fractures, it was not uncommon to see even a verbal child brought in two or three days after the injury because the parents attributed the symptoms to something else. He had also seen nonverbal children who had fractures for days, or even more than a week, before caretakers (or medical professionals) realized there was a problem that required medical

attention. Scott pointed to the numerous physicians who examined Z.D. at Primary and described him as cheerful, interactive, alert, and fussy, but consolable. At the hospital, Z.D. presented neither localized nor generalized symptoms. Further, at least six physical examinations of Z.D. specifically noted that there were no skin lesions, bruises, lacerations, abrasions, burns, or scars. Scott concluded that if the mechanism that caused the fracture were a direct force, as Herman believed it to be, then he would expect bruising around the leg because the force it takes to bruise soft tissues is less than the force it takes to break a bone. On the other hand, with the walker incident, the amount of force needed to be applied to the skin in order for the femur to fracture, is well below the amount required to bruise the skin. He also cited a study where over ninety percent of the children with suspected nonaccidental fractures also had soft tissue injuries.

¶17 After receiving all of the evidence, the juvenile court found that Herman "unequivocally testified that the femur fracture was the result of non-accidental trauma, and would have required significant and excessive force to cause such a complex femur fracture." The court was convinced that the fracture occurred on Saturday when Z.D. was in Father's care because the court was both "astonished and dumbfounded" as to why the symptoms would be absent on Wednesday, Thursday, Friday, and on Saturday morning, "but yet make such a sudden and demonstrative appearance on the afternoon of the same day."

¶18 The court concluded that Z.D. was abused and neglected while in Father's care, and that A.D. was a neglected child as a result of being in the same home as Z.D. See Utah Code Ann. § 78-3a-103(1)(s)(i)(E) (2002). Z.D. and A.D. were removed from the home. The court ordered DCFS to submit a reunification service plan.(4) Father and Mother appeal the trial court's adjudication.

ISSUE AND STANDARD OF REVIEW

¶19 Father argues that the juvenile court erred in finding that the State established abuse by clear and convincing evidence. See Utah R. Juv. P. 41(b). The standard for assessing whether evidence is "clear and convincing" has been articulated as follows:

While it rests primarily with the trial court to determine whether the evidence is clear and convincing, its finding is not necessarily conclusive, for in cases governed by the rule requiring such evidence the sufficiency of the evidence to support the finding should be considered by the appellate court in the light of that rule. . . . In such cases it is the duty of the appellate court in reviewing the evidence to determine, not whether the trier of facts could reasonably conclude that it is more probable that the fact to be proved exists than that it does not, . . . but whether the trier of facts could reasonably conclude that it is highly probable that the fact exists.

Lovett v. Continental Bank & Trust Co., 4 Utah 2d 76, 286 P.2d 1065, 1068 (1955) (quotations and citations omitted) (emphasis added). "An appellate court does not give factual determinations made by a trial judge the same amount of deference given to factual determinations made by a jury--that is, an appellate court does not, as a matter of course, resolve all conflicts in the evidence in favor of the appellee." Alta Indus. v. Hurst, 846 P.2d 1282, 1284 n.2 (Utah 1993) (citations omitted).

ANALYSIS

I. Type of Fracture

¶20 Even disregarding the testimony of defense witnesses Ingebretsen and Scott, who both testified that the fracture pattern was consistent with the forces identified by the walker incident, the remaining evidence presented varying opinions as to the probable mechanism.(5) Contrary to the court's finding, Herman's testimony was anything but "unequivocal." He testified that he could only be "51/49" percent certain that the fracture was caused by a significant axial force applied to a bent knee. This testimony, standing alone, is far from clear and convincing. Further, neither one of the State's own witnesses--Smith and Nixon--bolstered the opinion of Herman. Although Smith refrained from estimating the degree of force required, he thought the fracture could have resulted from the walker incident. Nixon thought the probable cause of the fracture was angular leverage.

¶21 As explained by both Scott and Ingebretsen, and uncontested by any of the State's witnesses, if the mechanism causing the fracture is assumed to be the result of an axial load, then more force would be required to cause the fracture than would be required by the leverage force created by the walker incident. None of the expert witnesses could provide an opinion as to how much force would be required to cause the fracture with either an axial load or the walker incident.

II. Age of Fracture

¶22 Both Wednesday and Saturday fall within the time period identified by the experts as to when the fracture likely occurred; thus, this factor does not help to establish that the fracture occurred on Saturday.

III. Symptoms Associated with Fracture

¶23 There was a great deal of conflicting evidence associated with the type and timing of symptoms. The court was "both astonished and dumbfounded" as to why the symptoms would be absent on Wednesday, Thursday, Friday, and Saturday morning, and "yet make such a sudden and demonstrative appearance on the afternoon of the same day." Yet, the court also recognized that Father saw very little of Z.D. on Wednesday, Thursday, and Friday, so that when the symptoms seemed to Father to "suddenly appear" on Saturday, Father had no way of comparing the symptoms exhibited on Saturday with the symptoms exhibited in the days prior. Further, the court did not acknowledge that Mother had given Z.D. regular doses of Tylenol on Wednesday, Thursday, and Friday, with the last dose being given at approximately 4:00-5:00 a.m. on Saturday. Even then, the court was not persuaded that "minimal doses of minor pain killers" could mask Z.D.'s symptoms. Yet, the State's witness, Sipher, testified that Tylenol may very well influence whether a caretaker is able to detect symptoms of an injury. Herman testified that children with fractures are prescribed something stronger than Tylenol or ibuprofen for pain, and he was surprised to find that the emergency department had initially given Z.D. only Tylenol after discovering the fracture.

¶24 The court found that "[m]edical experts testified and generally agreed that the pain and the symptoms attendant to the leg fracture would be significant and that the fracture would be extremely painful"; further, that the symptoms would be "readily detectable and observable by a caretaker." Yet the court made no mention of Sipher's testimony that it would not be surprising for the caretakers to attribute Z.D.'s fussiness to teething. Defense witness, Scott, testified that, in his eighteen years of treating children's fractures, it was not uncommon for nonverbal children, in the charge of medical professionals, to go for days, or even a week, after sustaining a fracture before receiving treatment because the medical professionals did not realize that a fracture had occurred. The court found that Father described Z.D.'s symptoms as significant, and that the hospital physicians and other doctors confirmed this description. Yet, Scott pointed to the medical reports from Primary itself, wherein Z.D. was described as cheerful, interactive, alert, and fussy, but consolable. Even when the first doctor at Primary examined Z.D. and moved his leg, he could not find anything wrong.

¶25 Perhaps the most significant symptom was the one not present. Noticeably removed from the court's findings and the State's case entirely, is any mention of, or explanation for, the absence of external injuries. Z.D. sustained no lesions, welts, bruising, swelling, redness, burns, abrasions, lacerations, or scars. If the fracture were caused by an axial

load, the mechanism believed by some State witnesses to be the probable cause, it would almost always be accompanied by a soft tissue injury like bruising or swelling.

¶26 Because the "explanations as to the cause of the injury provided by the parents [was] inconsistent with the medical testimony," the court determined that clear and convincing evidence had established that the fracture occurred on Saturday afternoon while Z.D. was in Father's care. However, we cannot say that, given the evidence presented, "the trier of facts could reasonably conclude that it [was] highly probable" that the fracture was the result of nonaccidental trauma inflicted by Father on Saturday afternoon. Lovett v. Continental Bank & Trust Co., 4 Utah 2d 76, 286 P.2d 1065, 1068 (1955).

CONCLUSION

¶27 The evidence does not clearly and convincingly establish that Z.D.'s fracture was caused by an axial load sometime on Saturday when he was in Father's care.

¶28 We therefore reverse.

_____

Russell W. Bench,

Associate Presiding Judge

¶29 WE CONCUR:

_____

Judith M. Billings,

Presiding Judge

_____

William A. Thorne Jr., Judge

1. The trial court received evidence on thirteen different days, spanning the time from March 21, 2003 to June 12, 2003. Undoubtedly, this elongated trial made it difficult for the trial judge to recall the evidence and to place it all in context.

2. Because of the abuse referral, Z.D. was admitted to the hospital.

3. During trial, when asked about his response to Grandmother's inquiry, Herman testified that he did not feel that the walker incident would have created the appropriate mechanism, or the appropriate kind of force, to cause the fracture.

4. Father and Mother successfully completed their service plan. DCFS involvement was eventually terminated, and the children were returned to the custody of Father and Mother without condition.

5. Scott agreed that an axial load could cause such a fracture. He described two possible scenarios: 1) the child stands with locked knees and is then slammed down or dropped, so that the force passes through the feet and into the knee and femur; and 2) the child experiences a blow to the end of the knee, directly over the kneecap. He explained that the first instance was unlikely because Z.D., as a nonambulatory child, did not have the muscle tone to stand and lock his knees. Additionally, the fracture pattern did not match that scenario. The second instance was unlikely because a direct blow strong enough to fracture a bone should leave a contusion, swelling, or welt over the kneecap. Again, the fracture pattern was not consistent with such a mechanism.